ISO 21012:2024-08 (E)

Cryogenic vessels - Hoses

Contents

Page

Foreword iv

1 Scope 1

2 Normative references 1

3 Termsanddefinitions 1

4 General requirements 2
4.1 Design and construction 2
4.2 Materials 3
4.3 Cleanliness 3
4.4 Mechanical properties 4
4.4.1 Burst pressure 4
4.4.2 Pressure cycles 4
4.4.3 Bending test 4
4.4.4 Resistance to abuse 4
4.4.5 Low temperature resistance 4
4.4.6 Leak tightness 4
4.4.7 Electrical properties 4

5 Hose sample tests 4
5.1 General 4
5.2 Non-destructive tests and inspection 6
5.2.1 Documentation of materials 6
5.2.2 Dimensional check 6
5.2.3 Cleanliness check 6
5.2.4 Pressure test 6
5.2.5 Leak test 6
5.2.6 Crushing test 6
5.3 Destructive tests 7
5.3.1 Hydraulic pressure cycling 7
5.3.2 Rolling bend cycling test 7
5.3.3 Hydraulic bursting test 7
5.3.4 Examination of sectional cut 8

6 Production testing 8
6.1 General 8
6.2 Pressure test 8
6.3 Leak test 8

7 Marking 8

8 Cleaning 9

9 Periodic examination 9

10 Testcertificate 9

Annex A (informative) Typical hose assembly 10

Annex B (normative) Rolling bend cycling test for metallic hose assemblies and hose assemblies made of materials with a record of satisfactory use in cryogenic service 11

Annex C (normative) Rolling bend cycling test for hose assemblies constructed from materials or composites not commonly used in cryogenic service 12

Annex D (informative)Guidelinesforperiodicexaminationoftransfillinghoses 14

Annex E (informative) Acceptable materials 15

Bibliography 21